Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fluorescent lamp electronic ballast comprising:

a power factor correction flyback circuit composed of a rectifier connected to a DC to DC flyback converter, the flyback converter including a flyback transformer connected to a diode/capacitor combination, the flyback converter including a switch used to switch the flyback transformer during operation to produce a flyback waveform that is rectified by the diode and results in a DC output at the capacitor; and

an inverter ballast circuit receiving the DC output and inverting the DC output to an AC signal for operating the ~~flourescent~~ fluorescent lamp.

2. (Original) The fluorescent lamp electronic ballast of claim 1 wherein the rectifier receives an AC input having a varying frequency and the rectifier has a sufficiently low input capacitance such that the rectifier output substantially takes the form of a rectified AC wave.

3. (Original) The fluorescent lamp electronic ballast of claim 1 wherein the flyback converter is configured to operate in a transition mode.

4. (Original) The fluorescent lamp electronic ballast of claim 3 wherein the flyback converter includes a control loop configured to monitor the flyback transformer and switch the flyback transformer asynchronously as needed to maintain energy balance.

5. (Currently Amended) The ~~flourescent~~ fluorescent lamp electronic ballast of claim 4 wherein the control loop is connected to the DC output.

6. (Currently Amended) ~~The fluorescent lamp electronic ballast of claim 1~~ A fluorescent lamp electronic ballast comprising:

a power factor correction flyback circuit composed of a rectifier connected to a DC to DC flyback converter, the flyback converter including a flyback transformer connected to a diode/capacitor combination, the flyback converter including a switch used to switch the flyback transformer during operation to produce a flyback waveform that is rectified by the diode and results in a DC output at the capacitor; and

an inverter ballast circuit receiving the DC output and inverting the DC output to an AC signal for operating the fluorescent lamp;

wherein the rectifier receives an AC input having a frequency that varies to frequencies exceeding 300 Hz.

7. (Currently Amended) ~~The fluorescent lamp electronic ballast of claim 1~~ A fluorescent lamp electronic ballast comprising:

a power factor correction flyback circuit composed of a rectifier connected to a DC to DC flyback converter, the flyback converter including a flyback transformer connected to a diode/capacitor combination, the flyback converter including a switch used to switch the flyback transformer during operation to produce a flyback waveform that is rectified by the diode and results in a DC output at the capacitor; and

an inverter ballast circuit receiving the DC output and inverting the DC output to an AC signal for operating the fluorescent lamp;

wherein the rectifier receives an AC input having a frequency that varies primarily between 300 Hz and 800 Hz.

8. (Currently Amended) ~~The flourescent lamp electronic ballast of claim 1~~ A fluorescent lamp electronic ballast comprising:

a power factor correction flyback circuit composed of a rectifier connected to a DC to DC flyback converter, the flyback converter including a flyback transformer connected to a diode/capacitor combination, the flyback converter including a switch used to switch the

flyback transformer during operation to produce a flyback waveform that is rectified by the diode and results in a DC output at the capacitor; and

an inverter ballast circuit receiving the DC output and inverting the DC output to an AC signal for operating the fluorescent lamp;

wherein the inverter ballast includes a self-oscillating resonant circuit including a pair of power transistors, and the flyback converter is further used to create a DC bias for use by the power transistors.

9. (Currently Amended) ~~The fluorescent lamp electronic ballast of claim 1~~ A fluorescent lamp electronic ballast comprising:

a power factor correction flyback circuit composed of a rectifier connected to a DC to DC flyback converter, the flyback converter including a flyback transformer connected to a diode/capacitor combination, the flyback converter including a switch used to switch the flyback transformer during operation to produce a flyback waveform that is rectified by the diode and results in a DC output at the capacitor; and

an inverter ballast circuit receiving the DC output and inverting the DC output to an AC signal for operating the fluorescent lamp;

wherein the DC output is 28 VDC.

10. (Currently Amended) ~~The fluorescent lamp electronic ballast of claim 1~~ A fluorescent lamp electronic ballast comprising:

a power factor correction flyback circuit composed of a rectifier connected to a DC to DC flyback converter, the flyback converter including a flyback transformer connected to a diode/capacitor combination, the flyback converter including a switch used to switch the flyback transformer during operation to produce a flyback waveform that is rectified by the diode and results in a DC output at the capacitor; and

an inverter ballast circuit receiving the DC output and inverting the DC output to an AC signal for operating the fluorescent lamp;

wherein the rectifier has an input capacitance of less than 0.5 microfarads.

11. (Currently Amended) ~~The fluorescent lamp electronic ballast of claim 1~~ A fluorescent lamp electronic ballast comprising:

a power factor correction flyback circuit composed of a rectifier connected to a DC to DC flyback converter, the flyback converter including a flyback transformer connected to a diode/capacitor combination, the flyback converter including a switch used to switch the flyback transformer during operation to produce a flyback waveform that is rectified by the diode and results in a DC output at the capacitor; and

an inverter ballast circuit receiving the DC output and inverting the DC output to an AC signal for operating the fluorescent lamp;

wherein a ratio of a line input peak voltage to the reflected voltage is less than one.